

WHAT IS CLAIMED IS:

1. A light guide panel of an edge-light type backlight system comprising:

a light incident part into which light enters from a point light source;

and

a light emitting surface from which light is emitted,

wherein the light incident part comprises:

a light incident surface on which a prism pattern is formed, the light incident surface facing the point light source; and

first and second surfaces extending from the light incident surface in a direction in which light travels and adapted to reflect light passing through the light incident surface to reduce a direction angle, the first and second surfaces being opposite to each other with respect to an optical axis.

2. The light guide panel of claim 1, wherein an angle between the first surface and the optical axis is the same as an angle between the second surface and the optical axis.

3. The light guide panel of claim 2, wherein the first and second surfaces are symmetrical about the optical axis.

4. The light guide panel of claim 1, wherein the prism pattern has a horizontal section in the shape of triangles.

5. The light guide panel of claim 4, wherein a relationship between an apex angle of the prism pattern and a half-maximum angle satisfies the following formula:

$$C_3 \geq (90 - \alpha) \times 2,$$

where C_3 denotes the apex angle of the prism pattern, and α denotes the half-maximum angle at which intensity of light emitted by the point light source is half maximum.

6. The light guide panel of claim 4, wherein the point light source includes a light emitting diode, and an apex angle of the prism pattern is greater than 90 degrees.

7. The light guide panel of claim 4, wherein the prism pattern has a horizontal section in the shape of isosceles triangles.

8. The light guide panel of claim 4, wherein a pitch of the prism pattern is in a range of 10 to 100 μm .

9. An edge-light type backlight system comprising:

a point light source;

a light guide panel including a light incident part into which light enters from the point light source and a light emitting surface from which light is emitted; and

an optical path-changing unit which changes a propagation path of light traveling inside the light guide panel,

wherein the light incident part comprises:

a light incident surface on which a prism pattern is formed, the light incident surface facing the point light source; and

first and second surfaces extending from the light incident surface in a direction in which light travels inside the light guide panel and adapted to reflect light passing through the light incident surface to reduce a direction angle, the first and second surfaces being opposite to each other with respect to an optical axis.

10. The edge-light type backlight system of claim 9, wherein an angle between the first surface and the optical axis is the same as an angle between the second surface and the optical axis.

11. The edge-light type backlight system of claim 10, wherein the first and second surfaces are symmetrical about the optical axis.

12. The edge-light type backlight system of claim 9, wherein the prism pattern has a horizontal section in the shape of triangles.

13. The edge-light type backlight system of claim 12, wherein a relationship between an apex angle of the prism pattern and a half-maximum angle satisfies the following formula:

$$C_3 \geq (90 - \alpha) \times 2,$$

where C_3 denotes the apex angle of the prism pattern, and α denotes the half-maximum angle at which intensity of light emitted by the point light source is half maximum.

14. The edge-light type backlight system of claim 12, wherein the point light source includes a light emitting diode, and an apex angle of the prism pattern is greater than 90 degrees.

15. The edge-light type backlight system of claim 12, wherein the prism pattern has a horizontal section in the shape of isosceles triangles.

16. The edge-light type backlight system of claim 12, wherein a pitch of the prism pattern is in a range of 10 to 100 μm .

17. The edge-light type backlight system of claim 9, wherein the optical path-changing unit includes a holographic pattern formed on at least one of the light emitting surface of the light guide panel and a surface opposite to the light emitting surface.

18. The edge-light type backlight system of claim 9, wherein the optical path-changing unit includes a scattering pattern formed on at least one of the light emitting surface of the light guide panel and a surface opposite to the light emitting surface.